SCRAP TIRE RECYCLING

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Alternate Energy Associates, Inc
MTR Acquisitions, Inc.

BACKGROUND

- Engineer—Energy R&D with Government
- Began work on scrap tires while at TVA
  - In 1991, Jim Hall asked Marvin Runyon for help
  - I got the task and began project to burn TDF at Allen Steam plant
  - Original partners—Goodyear and Tom Carter
- After leaving TVA worked with Tom to use whole tires at Signal Mountain Cement
- Helped TDEC and Wayne Scharber set up scrap tire options program

CURRENT SITUATION

- In 2005, Tom Carter and others formed MTR Acquisitions, Inc. from
  - Mac's Tire Recyclers of Mississippi
  - GreenMan Technologies of Georgia
- Now serves much of Southeast
  - Tennessee
  - Mississippi
  - Georgia
  - Kentucky
  - Florida
  - Alabama

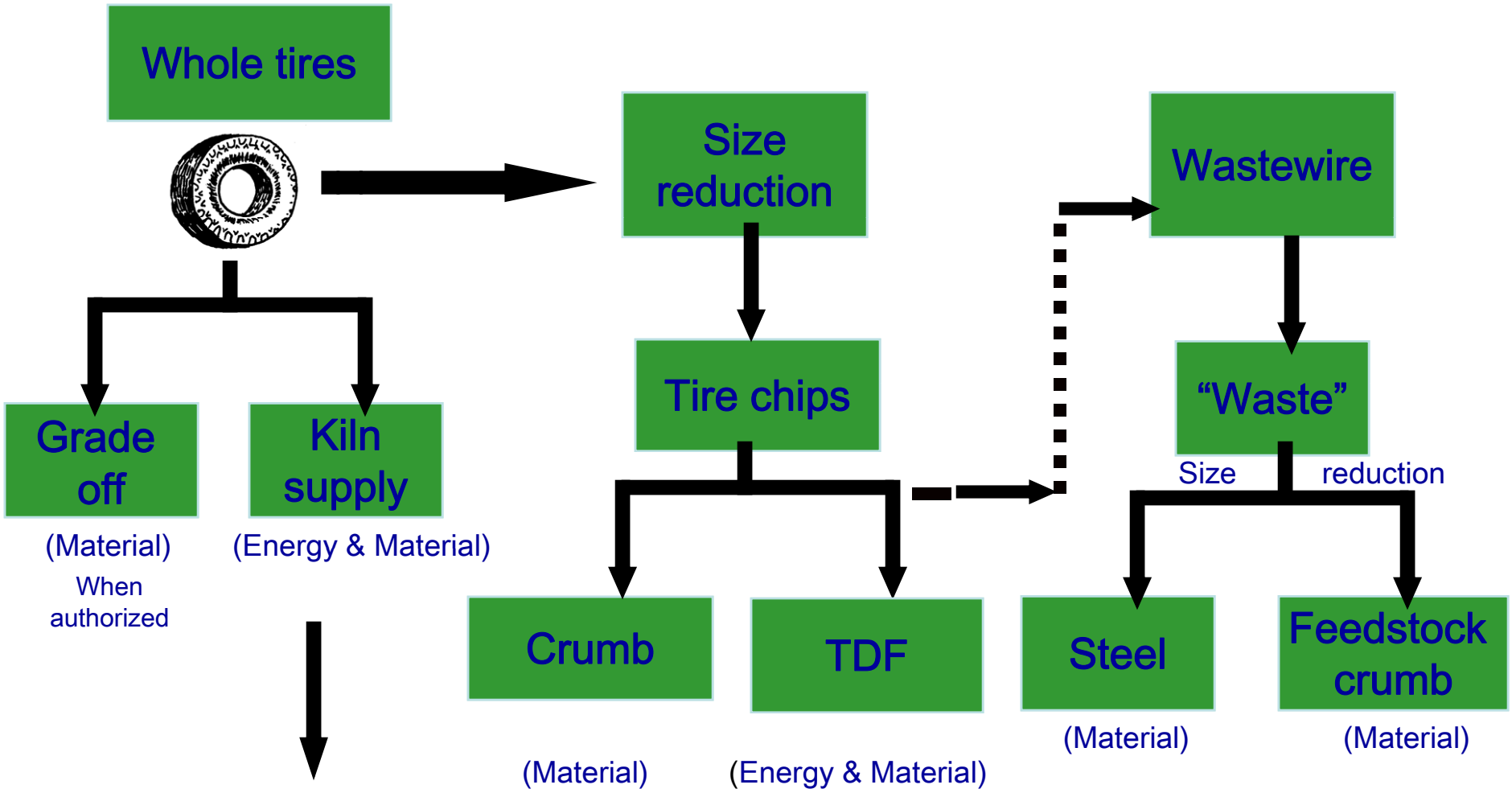
SCRAP TIRES ARE SPECIAL

- Singled out in TN Solid Waste Legislation
  - Special predisposal fee
  - Special TDEC disposal program
- Not legal to landfill whole tires
- Tires not commingled with other solid wastes
- Tires are designed to last not be recycled
- Generators pay for collection explicitly
- Even when gathered, whole tires have a negative value

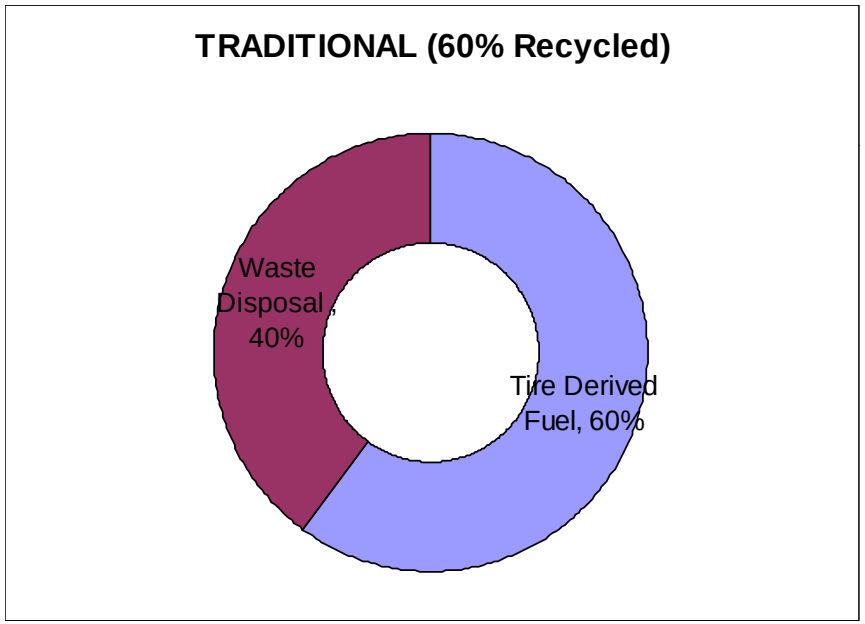
KEY PLAYERS

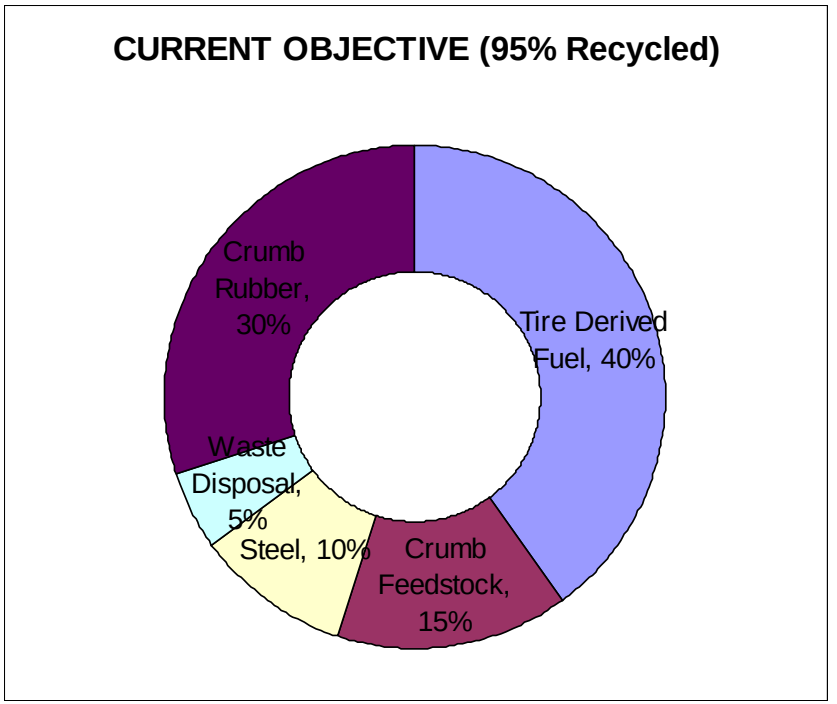
- Tire retailers—primary generators
- Tire haulers—”tire jockeys”
- County collection sites
- Tire processors—such as MTR
- End users
  - Cement kilns
  - Paper mills
  - Others

MTR SCRAP TIRE PROCESSING

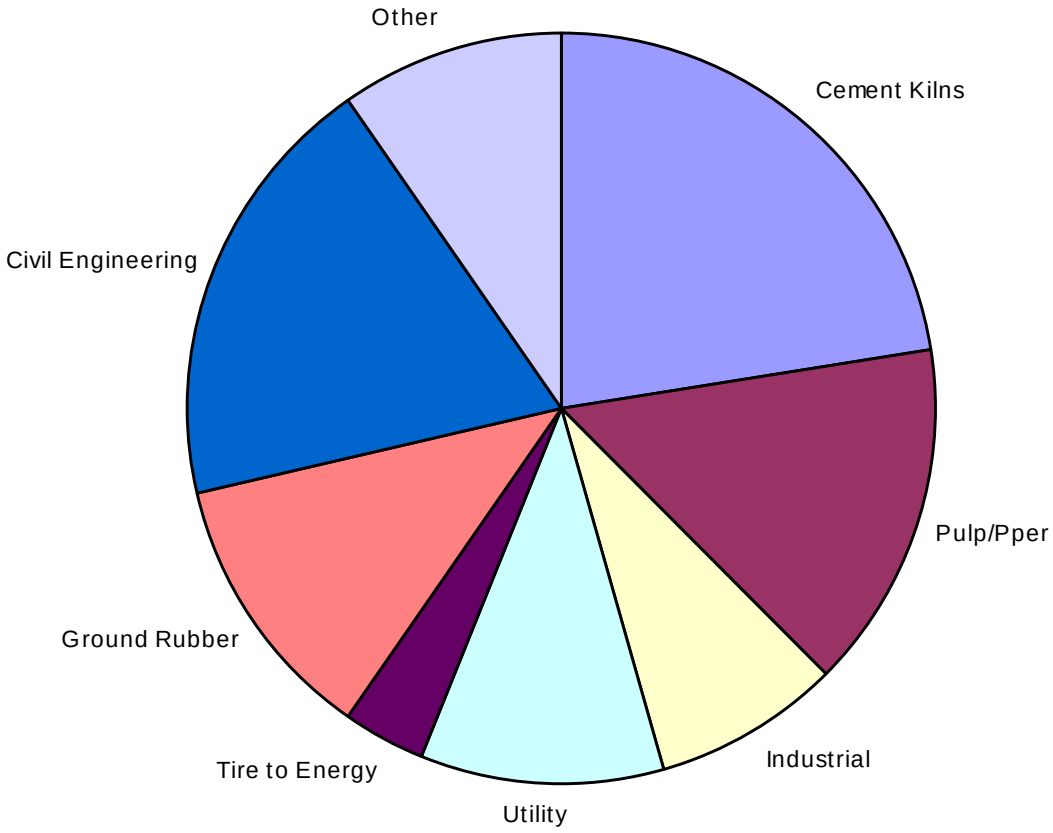


SCRAP TIRE PROCESSING EVOLUTION





SCRAP TIRE RECYCLING IN USA (2005)



CURRENT SITUATION IN THE SOUTHEAST

- Strong markets for Tire Derived Fuel
  - Cement kilns
  - Paper mills
- Other markets smaller but significant
  - Mulch and Athletic Surfaces
  - Crumb
  - Ground Rubber
  - Civil Engineering
- Overall Demand Exceeds Available Supply

MULCH FROM SCRAP TIRES

FORMED MULCH FOR PLAYGROUNDS

CURBING BLOCK FROM SCRAP TIRES

CURRENT MULTISTATE MARKET

- Growth of large processors with multiple facilities serving regions rather than single end users and/or states
- End use markets continually evolving
- Transportation costs and end users determine markets—not political borders
- Larger operations make it feasible to balance generator and end user needs

SCRAP TIRE ECONOMICS

ACTIVITY	RANGE in $ per ton	TYPICAL VALUE
COSTS		
Collect tires from small generators and load in semi trailer	$25 to $75	$35
Haul trailer to processing facility	$10 to $30 per 100 miles	$20 per 100 miles
Shred tire to produce TDF	$30 to $50	$40
Fraction of incoming tires resulting in salable product	50% to 70%	60%
Dispose of wire containing rejects per ton of incoming tire	$5 to $20	$12
Haul TDF to end user per ton of TDF	$5 to $15	$10 per 100 miles
REVENUES		
Disposal fee paid by waste tire generator	$65 to $150	$100 ($1/pass. tire)
Delivered price of TDF to end user per ton of TDF	$25 to $50	$35

CONVERSION FACTORS

- 100 passenger car tires equal 1 ton; therefore $1 per ton equals 1¢ per car tire
- 20 semi truck tires equals 1 ton; therefore $1 per ton equals 5¢ per truck tire
- Actual tire weights are now running higher, so fewer tires per ton

MTR LOCATIONS

- Saltillo, MS Processing site and Landfill
- Jackson, GA Processing site
- Attalla, AL (Abatement)
- Memphis, TN (Shelby County) Transfer Site
- Nashville, TN (Davidson County) Transfer Site
- MTR of Knoxville
- MTR of Florida (Transfer Site)
- MTR of Kentucky (Developing)
- Kiln Sites

MTR: TENNESSEE COUNTY UPDATE

- Currently servicing 76 of 95 counties
- In September 2006 served 61 counties
- Key additions:
- Williamson
- White, Anderson
- Dyer, Dickson, Dekalb
- Continued emphasis on Customer
- Service and sales contacts
- Sales reps with specific emphasis on East and West Tennessee.